

LISTING OF THE CLAIMS

1. (Original) A liquid crystal display (LCD) comprising:
 - a first substrate and a second substrate;
 - a plurality of gate lines and data lines formed on the first substrate perpendicular to each other to define a plurality of pixel regions;
 - a thin film transistor formed for every one pixel;
 - a common electrode on the second substrate;
 - a gate pad, a data pad, and a common electrode pad electrically connected to each of the gate lines, data lines, and common electrodes, respectively;
 - a data on/off pad between adjacent data pads in substantially the same pattern as the data pad for testing a data signal applied to the pixel region;
 - a gate on/off pad between adjacent gate pads in substantially the same pattern as the gate pad for testing a gate signal applied to the pixel region; and,
 - a common electrode on/off pad for testing a common electrode signal applied to the pixel region.
2. (Original) An LCD as claimed in claim 1, wherein a pitch between the data pad and the data on/off pad is substantially identical to the pitch between the data pads.
3. (Original) An LCD as claimed in claim 1, wherein the gate on/off pad has a pattern substantially identical to the pattern of the gate pad.

4. (Original) An LCD as claimed in claim 3, wherein a pitch between the gate pad and the gate on/off pad is substantially identical to the pitch between the gate pads.

5. (Original) An LCD as claimed in claim 1, wherein each of the gate on/off pad, the data on/off pad, and the common electrode on/off pad include a transparent conductive material.

6. (Original) An LCD as claimed in claim 5, wherein the transparent conductive material includes indium tin oxide.

7. (Original) An LCD as claimed in claim 1, wherein the thin film transistor includes;

- a gate electrode connected with a gate line;
- a gate insulating film on an entire surface of the substrate inclusive of the gate electrode;
- a semiconductor layer on the gate insulating film;
- an ohmic contact layer on the semiconductor layer; and
- source and drain electrodes on the ohmic contact layer.

8. (Original) A liquid crystal display (LCD) comprising:

- a first substrate and a second substrate;
- gate lines and common lines formed on the first substrate;
- data lines formed perpendicular to gate lines to define a plurality of pixel regions;
- a thin film transistor formed for every one pixel;

a common electrode and a data electrode in parallel for generating an in-plane field between the common electrode and the data electrode;

a gate pad, a data pad, and a common electrode pad electrically connected to each of the gate lines, data lines, and common lines, respectively;

a data on/off pad between adjacent data pads in substantially the same pattern as the data pad;

a gate on/off pad between adjacent gate pads in substantially the same pattern as the gate pad; and,

a common electrode on/off pad between adjacent common electrode pads for testing a common electrode signal applied to the pixel region.

9. (Original) An LCD as claimed in claim 8, wherein a pitch between the data pad and the data on/off pad is substantially identical to the pitch between the data pads.

10. (Original) An LCD as claimed in claim 8, wherein the gate on/off pad has a pattern substantially identical to the pattern of the gate pad.

11. (Original) An LCD as claimed in claim 10, wherein a pitch between the gate pad and the gate on/off pad is substantially identical to the pitch between the gate pads.

12. (Original) An LCD as claimed in claim 8, wherein the common electrode on/off pad has a pattern substantially identical to the pattern of the common electrode pad.

13. (Original) An LCD as claimed in claim 12, wherein a pitch between the common electrode pad and the common electrode on/off pad is substantially identical to the pitch between the common electrode pads.

14. (Original) An LCD as claimed in claim 8, wherein each of the gate on/off pad, the data on/off pad, and the common electrode on/off pad include a transparent conductive material.

15. (Original) An LCD as claimed in claim 14, wherein the transparent conductive material includes indium tin oxide.

16. (Original) An LCD as claimed in claim 8, wherein the thin film transistor includes;

- a gate electrode connected with a gate line;
- a gate insulating film on an entire surface of the substrate including the gate electrode;
- a semiconductor layer on the gate insulating film;
- an ohmic contact layer on the semiconductor layer; and
- source and drain electrodes on the ohmic contact layer.

17. (Original) A liquid crystal device (LCD) comprising:

- an upper substrate having a pixel region defined thereon;
- a lower substrate bonded with the upper substrate by a sealing material and having a plurality of pads provided at edges of the lower substrate, the plurality of pads including data pads, gate pads, testing data on/off pads and testing gate on off/pads;

wherein at least one of the testing data on/off pads and the testing gate on/off pads has substantially the same pattern as the data pads and the gate pads, respectively; and

a liquid crystal provided between the substrates.

18. (Original) An LCD as claimed in claim 17, wherein a pitch between the data pad and the data on/off pad is substantially identical to the pitch between the data pads.

19. (Original) An LCD as claimed in claim 17, wherein the gate on/off pad has a pattern substantially identical to the pattern of the gate pad.

20. (Original) An LCD as claimed in claim 17, wherein a pitch between the gate pad and the gate on/off pad is substantially identical to the pitch between the gate pads.

21. (Original) An LCD as claimed in claim 17, wherein each of the gate on/off pad and the data on/off pad include a transparent conductive material.

22. (Original) An LCD as claimed in claim 21, wherein the transparent conductive material includes indium tin oxide.

23. (Original) An LCD as claimed in claim 17, wherein all of the common electrode, data and gate pads and the on/off pads are connected at an outer circumference of the LCD in an L line for applying a signal to the pixel region at substantially the same time.

24. (Original) An LCD as claimed in claim 17, wherein a data line is connected to an even numbered pad and an even numbered on/off pad.

25. (Original) An LCD as claimed in claim 17, wherein a data line is connected to an odd numbered pad and an odd numbered on/off pad.

26. (Original) An LCD as claimed in claim 17, further comprising an orientation film provided on the lower substrate.

27. (Original) A method of manufacturing a liquid crystal device (LCD) comprising:

forming a gate line made of metal on a transparent substrate;

forming a gate electrode at the same time as the gate line;

forming a gate insulating film on the gate line;

forming a protection film on the gate insulating film;

etching the gate insulating film and the protection film to form first open parts;

forming gate pads made of a transparent conductive material to connect with the gate line through the first open parts;

forming a pixel electrode at the same time as the gate pads;

forming a data line on the gate insulating film;

forming source and drain electrodes at the same time as the data line;

etching the protection film to form second open parts;

forming data pads made of transparent conductive material to connect with the data line through the second open parts; and

forming gate on/off pads and data on/off pads having substantially the same pattern as the gate pads and provided between gate pads.

28. (Original) The method as in claim 27, wherein the data line and source and drain electrodes are formed after a semiconductor layer and an ohmic contact layer are formed.

29. (Original) The method as in claim 27, wherein the orientation film is rubbed with a rubbing cloth to form grooves in the film.